

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 42 330 . : . be	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/013444	International filing date (<i>day/month/year</i>) 26.11.2004	Priority date (<i>day/month/year</i>) 18.12.2003
International Patent Classification (IPC) or national classification and IPC B22D11/115		
Applicant SMS DEMAG AG		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>4</u> sheets, as follows: <div><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <div><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/013444

Box No. I	Basis of the report
1.	<p>With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (Rule 12.3 and 23.1(b))</p> <p><input type="checkbox"/> publication of the international application (Rule 12.4)</p> <p><input type="checkbox"/> international preliminary examination (Rule 55.2 and/or 55.3)</p> <p>2. With regard to the elements of the international application, this report is based on <i>(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)</i>:</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p>pages <u>2, 5, 6</u> as originally filed/furnished</p> <p>pages* <u>1, 3, 4</u> received by this Authority on <u>12.10.2005 with telefax</u></p> <p>pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p>nos. _____ as originally filed/furnished</p> <p>nos.* _____ as amended (together with any statement) under Article 19</p> <p>nos.* <u>1, 2</u> received by this Authority on <u>12.10.2005 with telefax</u></p> <p>nos.* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the drawings:</p> <p>sheets <u>1/1</u> as originally filed/furnished</p> <p>sheets* _____ received by this Authority on _____</p> <p>sheets* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.</p>
3.	<p><input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p>
4.	<p><input type="checkbox"/> This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p>

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/013444

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement															
1. Statement	<table><tbody><tr><td rowspan="2">Novelty (N)</td><td>Claims <u>1, 2</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr><tr><td rowspan="2">Inventive step (IS)</td><td>Claims <u>1, 2</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr><tr><td rowspan="2">Industrial applicability (IA)</td><td>Claims <u>1, 2</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr></tbody></table>	Novelty (N)	Claims <u>1, 2</u>	YES	Claims _____	NO	Inventive step (IS)	Claims <u>1, 2</u>	YES	Claims _____	NO	Industrial applicability (IA)	Claims <u>1, 2</u>	YES	Claims _____	NO
Novelty (N)	Claims <u>1, 2</u>		YES													
	Claims _____	NO														
Inventive step (IS)	Claims <u>1, 2</u>	YES														
	Claims _____	NO														
Industrial applicability (IA)	Claims <u>1, 2</u>	YES														
	Claims _____	NO														
2. Citations and explanations (Rule 70.7)	<p>1 This report makes reference to the following documents:</p> <p>D1: EP 0 568 579 A (ASEA BROWN BOVERI AG) 10 November 1993 (1993-11-10)</p> <p>D2: FR 2 628 994 A (VIVES CHARLES) 29 September 1989 (1989-09-29)</p> <p>D3: WO 03/028925 A (SMS DEMAG AKTIENGESELLSCHAFT; EBERWEIN, KLAUS- PETER) 10 April 2003 (2003-04-10)</p> <p>2 Novelty and inventive step, PCT Article 33(2)</p> <p>D1 is regarded as the prior art and discloses a continuous casting mold in which permanent magnets (15b) are attached to the mold (11) (figure 1) in order to influence the flow of the liquid metal.</p> <p>D1 offers two alternative solutions for varying the field strength:</p> <p>- The magnets themselves can be slid into slots in the water chamber (claim 7, column 6, lines 39-57), or</p>															

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

- displaceable core elements can be inserted into the magnets (claim 7, column 6, line 58 to column 7, line 6).

Furthermore, D1 indicates that the permanent magnets are arranged in or near the water chamber (14) (column 6, lines 15ff.).

In D1, the permanent magnets are attached to the mold so as to be adjacent thereto or adjoining therewith.

Therefore, D1 also describes all of the characterizing features of the preamble of claim 1.

D1 describes and shows only translational movements of the permanent magnets.

Therefore, the pivotable adjusting means according to the characterizing part of claim 1 are novel.

Consequently, the problem of providing means for varying the field strength of the permanent magnets is solved in a different manner. The rotation causes the field strength to be additionally reduced in comparison to a translational movement, thereby rendering it easier to remove the magnets.

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>Although in D3 electromagnets are applied to the mold in a pivoting motion, in this case, the magnets and the rotation device or applying device are not attached to the mold, owing to the weight issue during oscillation.</p> <p>Although according to D2 the magnets are rotated, it is not in order to adjust the field strength.</p> <p>Therefore none of the additionally cited documents renders it obvious to use pivotable adjusting means according to claim 1.</p> <p>3. Additional observations</p> <p>After the amendment of the claims, the pivoting motion is not merely a preferred embodiment. Therefore the word "preferably" on page 4, line 29 should be deleted when the application enters a regional phase, as should the embodiment of the rotatable spindles (line 30).</p>